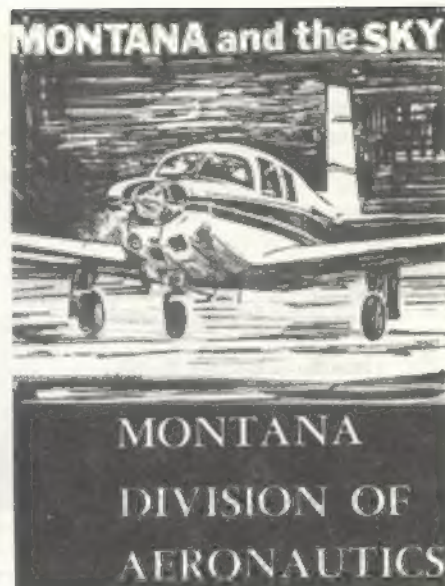




Vivienne Schrank and Pearl Laska in front of 3381M.



VOL. 28, NO. 7

JULY-AUGUST, 1977

## POWDER PUFF DERBY MONTANA PARTICIPANTS

Pictured above are Vivienne Schrank and Pearl Laska on the airstrip at Jordan, Montana, just before takeoff for the commemorating Powder Puff Derby. The plane is Vivienne's 3381M.

The trip was successful as far as Palm Springs, but we are sorry to say that on takeoff there the brakes stuck, the plane ground looped, the prop was bent and other minor damage done to the plane. Vivienne and Pearl were not injured.

After repairs to the aircraft they flew it home.

Congratulations Vivienne on a great try!

## PROSPECTS FOR AIRCRAFT MECHANICS

General Aviation could be short of trained aircraft mechanics within the next five years when the veteran mechanics who received their training in World War II are retired. It is estimated that 75,000 of the WW II mechanics will retire within five years. Such people make up about one-third of the 200,000 maintenance work force which includes the airlines and the military. (Utah Aviation News)

## MPA AIR RACE

The Great Falls Hangar of the MPA is sponsoring their first annual VFR "HELLOWEEN" handicap air race from Great Falls to Jackpot, Nevada, October 29, 1977. Prize money will be \$1,000 plus. The race is limited to 40 airplanes and will be on a first come basis. Only MPA pilots may participate.

Aircraft must depart from Great Falls and must RON in Jackpot to be qualified for prizes.

Entry fees are:

2 place aircraft	\$ 70.00
4 place aircraft	120.00
Over 4 place aircraft add	\$30.00
per passenger over 4 passengers.	

Entry fee must accompany the application. Application deadline is 2400 September 15. All entry fees will be returned in full if not accepted. Entry fee includes one night lodging for race pilot and three passengers. Airplane seats must be full up to four seats, four persons per room, or \$15.00 per room extra.

Awards will be presented Saturday afternoon, October 29. Saturday evening will feature a dinner show for all, Sunday morning a buffet lunch. (All included in entry fee.)

Four categories will participate:

Cruise speed 169 mph and below
170 mph to 199
200 mph and over

Aircraft requiring one fuel stop.

For further information and entry

forms contact Patti Thompson, 2824 4th Avenue South, Great Falls, MT 59405. Phone: (Home) 452-8800, (Business) 761-6453.

## ATTENTION PILOTS

Does Montana have all the Federal enroute and terminal airway facilities necessary for safe and expeditious flight?

Please review your own experiences and let us know what improvements to the FAA system would be beneficial. A few of the many items to be considered:

VOR in the Glendive area—Broadus area, other;

DME to be added to Kalispell VOR—others;

Glide Slopes—more power;

Single frequency outlets for communication from remote sites;

Airport lighting, approach aids, NDB's with approaches, etc.

Your list of needed services and facilities for Montana should be sent to us as soon as possible as we must have this information compiled and in to the FAA by the end of the month for consideration in their facilities and equipment budget.

Your input is needed. The FAA has to know our needs before they can be considered and/or implemented.

**DEPARTMENT OF  
COMMUNITY AFFAIRS**

**Thomas L. Judge, Governor  
Harold A. Fryslie, Director  
Martin T. Mangan, Deputy Director**

**Official Monthly Publication  
of the  
AERONAUTICS DIVISION  
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**Helena, Montana 59601**

**Michael D. Ferguson  
Administrator**

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A. J. Patenaude, Member  
Herb Sammons, Member  
Merle Thorstad, Member  
Charles E. Marshall, Member**



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THURBER'S HELENA

## Administrator's Column

Jerry Burrows and I attended the Schafer Meadows Fly-In which turned out to be a huge success. It was gratifying to see representation from the 99's, Flying Farmers, MPA and EAA in attendance. Needed runway maintenance was accomplished and the runway is considered in excellent condition. See article by Phyllis Sammons elsewhere in this publication.

I attended the Livingston Air Show July 24 and even though the weather conditions were somewhat adverse, the show was well attended and did go on as scheduled. Exciting and excellent aerobatics were performed by Phil Petrik of Sidney in his Pitts Special SR2, and Stuart Lucke of Inkster, North



Aeronautics Board at state owned Yellowstone Airport, left to right, Bruce Vanica, Merle Thorstad, Charles Marshall, A. J. Patenaude, Herb Sammons, William Merrick. Chairman Richard O'Brien was absent.

Dakota in his Chipmunk. In spite of windy conditions John and Bob Neils of Bozeman were able to fly their glider and even demonstrated some aerobatics.

Skydivers performed between the aerobatic events and demonstrated their ability to perform precision skydiving, even in the windy conditions.

I think one of the most enjoyable features was the entertainment provided by the Blue Grass group led by Shelley Park. Harold Matovich was kept busy between helping his wife Sharon with the air show activities and playing his guitar with the Blue Grass group. There is no doubt in my mind that Shelley demonstrated the finest fiddle music I have ever heard, and although I hate to say this, I think she is even better than Martin Matovich of Malta.

\* \* \* \* \*

Our Aeronautics Board met in West Yellowstone July 21 and 22. Ted Mathis, our airport manager, conducted a tour of the facilities for the new board members and Harold Fryslie, the new Director of the Department of Community Affairs.

The Interagency Fire Control Center Smokejumpers conducted a practice jump in their full regalia which was most impressive.

Airport Manager Mathis called a simulated fire drill and amazed everyone by the 47 second response

time to the center of the runway, using mostly volunteer personnel from the Yellowstone Airport vendors and one of the airlines. It was really an eye opener to see a group of volunteers perform as a highly skilled team. Ted has been successful in enlisting and training personnel from Western Airlines, Yellowstone Aviation, Hertz, Avis and National Car Rentals, and the Interagency Fire Control Center personnel. To my knowledge, Yellowstone Airport is the only jet air carrier airport that provides a volunteer crash-fire-rescue team such as this.

\* \* \* \* \*

The Aeronautics Division solicited bids for a new or used, all weather, pressurized, twin engine aircraft and the bid opening was July 26. After careful evaluation the bid was awarded to Combs Airways of Billings, Montana, for a 1973 A-60 Duke. The evaluation indicated this airplane to be the best offer. The airplane has 1,009 hours total time with zero time 1600 TBO engines. The 1967 Queen Air presently owned by Aeronautics will be traded in on the Duke.

## NOTAM

A radio control has been installed for the runway lights and beacon at the Three Forks Airport. Five (5) mike clicks on 122.8 turns the lights on, seven (7) clicks turns the lights off.

## GA TERMINAL ACCESS

By: **David C. Kneedler**, Chief  
Airport/Airways Bureau

General Aviation's access to airport terminal buildings in Montana and elsewhere ranges from fair to poor. And without industry pressure in appropriate places it's not likely to improve.

The underlying cause is the security restrictions and demands imposed by the federal government through FAR Part 107 together with the fact that the vast majority of our terminal buildings were designed and constructed at a time when security requirements were unheard of. We watched as hijackings and other acts of terrorism forced airport operators to take whatever measures necessary to insure the safety of the airline passengers and crews but we didn't really consider that the drastic measures needed would also have the unfortunate side effect that general aviation people couldn't get into the terminal buildings any easier than the skyjackers.

So, from the beginning, that segment of aviation thus discriminated against complained to everyone they could think of; airport operators, state aeronautics departments, governors, federal government, congress, etc. Then Congress, in its Airport and Airway Development Act Amendments of 1976 (the law through which the federal government grants money for airport development purposes) included a requirement that was supposed to force any airport desiring federal money to provide adequate general aviation access to its air carrier terminal building. Unfortunately, and perhaps through political expediency, the clause was weasle-worded to the extent that it really does very little. In essence, what it says is that the airport must provide access, period! I suppose that climbing over a chain-link security fence and walking around to the main doors of the building could be construed as "access."

We need to realize that the airport operator, in his daily struggle to operate and maintain his airport on an extremely limited budget, is not going to go any further than he has to in providing access. This is understandable. The obvious conclusion then is that it is up to the general aviation segment of the industry to force the issue.



Lt. Gov. Ted Schwinden congratulating new officers of the Montana Pilots Association, left to right: Ted Schwinden; Carl Harbaugh, Eastern Director; Don Eades, Western Director; Dr. John Stephan, Western Vice President; Morris Rudio, President; Jim Monger, Treasurer; Frank Stoltz, Eastern Vice President; Miltzi Eades, Secretary; and Jerry Coldwell, outgoing president.



GATES OF THE MOUNTAIN BOAT TRIP.

MPA CONVENTION, June 17, 1977





Jan and Larry Nelson, Havre Aviation.

## HAVRE AVIATION

On June 15, 1977, Mr. and Mrs. Larry Nelson purchased Havre Aviation which is located in the Havre Airport terminal. Larry is a commercial pilot, single and multi engine with a Certified Flight Instructor Instrument rating. Also, in March, Larry received his A & P License.

Larry's wife, Jan, graduated from Eastern Montana College in 1974 and will be the secretary/Bookkeeper for Havre Aviation.

Also in the full time employ of Havre Aviation is Tim Dwyer. Tim is a commercial pilot, single and multi engine with flight instructor ratings.

If you are ever in the Havre area, stop in and see Larry, Jan and Tim and let them help you with your flying needs.

## WHIRLY-GIRLS SCHOLARSHIP APPLICATIONS NOW AVAILABLE

Applications are now being accepted for the two \$3,000 Whirly-Girls 1978 Scholarships (one international—one U.S.) which will be awarded next January to two deserving women pilots for use toward obtaining initial or advanced helicopter training.

The Whirly-Girls, international women helicopter pilots, since 1968 have awarded the Doris Mullen Whirly-Girls Scholarship in memory of Whirly-Girl #84, Doris Mullen. In 1978, this scholarship has been designated to be awarded to a woman pilot applicant

who is a native of a country other than the United States.

In 1978, the first Whirly-Girls Enstrom Helicopter Corporation scholarship will be awarded to a U.S. woman applicant.

Scholarship applicants must hold a current pilot certificate, must intend to make use of the helicopter rating in such a way as to further the involvement of women in aviation, and must demonstrate that they require financial assistance to obtain the rating.

Applications are available from The Whirly-Girls, Suite 700, 1725 DeSales Street, N.W., Washington, D.C. 20036 USA. Deadline for their return is October 31, 1977.

The 11th Annual Doris Mullen Whirly-Girls Scholarship and the first Whirly-Girls Enstrom Helicopter Corporation Scholarship will be presented at the Whirly-Girls Award Dinner, January 29, 1978, in conjunction with the annual convention of The Helicopter Association of America in San Diego, California.

## ACCIDENT PREVENTION

**Flight Operations Near Forest & Range Fires**—A few unauthorized aircraft continue to operate near fire areas. These operators delay firefighting efforts and increase the possibility of a mid-air collision. Aerial fire fighting crews have a very demanding job—please help them by staying well clear of any fire areas.

## SCHAFER MEADOW FLY-IN

By: Phyllis Sammons

Herb Sammons, Cut Bank, was chairman for the Schafer Meadow Fly-In July 15-17, 1977. The event was sponsored by the Montana Pilots Association, Montana Flying Farmers, 99's and Aeronautics Division. Also represented were the Experimental Aircraft Association, Chapter 182 and the Kalispell Division of the Montana Guard.

There were 28 planes with 115 people. Shuttle flying was done by Dr. Milton Small and Don Eades of Great Falls, Bob Colby and Dr. John Stephan of Kalispell, and Dick Kullberg, Norman Eberhardt, Jack Belt and Chet and Herb Sammons of Cut Bank, all of whom made more than one trip in and out with passengers and gear.

There were three great days of fun, fishing, food, flying and visiting. Four big Dolly Vardens was the big catch by Rocky Baker of Kalispell and Dick Moats of Bozeman. Evening campfire entertainment was by Norman Eberhardt of Cut Bank with his concertina, Herb Sammons on the mouth organ, and the voices of the group.

Gordon Sands, Havre, and Dick Kullberg of Cut Bank were the oldest and longest flying pilots in the group; Greg Sammons (son of Chet Sammons) was the youngest and made several flights in and out.

Numerous other aircraft used the Schafer strip in "touch and go's" these days with the Mountain Flying Course offered in Choteau.

## NOTAM

A single frequency outlet (SFO) was commissioned June 30, 1977. This FAA outlet sits atop the Judith Mountains range in central Montana. The frequency is 122.2 and it is controlled by the Lewistown Flight Service Station. The service area includes almost all of the northcentral and northeast part of the state from traffic pattern altitudes and above.

Judith Mountain SFO LWT FSS 122.2.

## "OUR EXCUSE"

"If you find mistakes in this publication, please consider they are put there for a purpose. We try to publish something for everyone, and some people are always looking for mistakes." (Illinois DOT)

## AVIATION EDUCATION

By: Sam Griggs, Supervisor

Five college level aviation/aerospace workshops were held during June and July. These were mainly for teachers needing additional credits for recertification, as well as some new ideas, materials, and resources.

They were held in Havre, Helena, Butte, Bozeman and Billings. They averaged three credits for two weeks of work. The Aeronautics Division provided on an average of 50 percent tuition scholarship. Class sizes ranged up to 26 students with Butte holding top honors.

Speakers were selected from NASA, Weather Bureau, Military, Flight Service, professional pilots and flight instructors, Tower and Air Route Traffic Control personnel.

Judging by the critiques, it was another highly successful workshop year.

## LIVINGSTON AIR SHOW

By: Bill Rahn

Cloudy skies and wind threatened to spoil the Livingston Air Show on July 24 but at the last moment the wind subsided to a mild breeze, even by other than Livingston standards, and the show went on as scheduled.

An estimated crowd of 2,000 to 2,500 people were entertained, thrilled and amazed by the precision aerobatic performance of Stuart Lucke of Inkster, North Dakota in his modified DeHaviland Chipmunk, and Phil Petrik of Sidney, Montana, in his recently acquired Pitts Special SR2.

John and Bob Neils, Bozeman, demonstrated with their homebuilt sailplane that horsepower isn't always the answer. Graceful maneuvers, including aerobatics performed using only the motive forces of nature, were of considerable interest to people of this area who were unaware of a sailplane's capabilities.

Falling from the sky supported only by their trusted parachutes, were the members of Star Flight, Inc., the Bozeman Skydiving Club. Members came from far and wide to participate and demonstrate that skydiving can be an interesting and safe sport.

During lulls in the activities live blue grass music was provided, led by Shelley Park, Ladies' Champion Fiddler of Jackson, Wyoming, and narrating the show was Frank Bass,

Montana's Flying Auctioneer from Lewistown.

During the morning hours prior to the Air Show some 46 airplanes flew into the Mission Airport. Among these were antiques and homebuilts.

Prizes were awarded in the following categories: Homebuilt, John Lenhardt of Billings; Best Antique, Ray Kemmis, Sidney; Oldest Antique, Steve Buck, Lewistown; Youngest Pilot, Blake Simpson, Bozeman; Oldest Pilot, Harold Price, Billings; Farthest Traveled, Bob Schroder, Erie, North Dakota.

The show was free to the public and sponsored by the local Park County business people and organized by Michels Flying Service of Livingston.

## "BE PREPARED"

By: Dale Uppinghouse

Accident Prevention Specialist  
FAA Rocky Mountain GADO 1

No one "gets ready" for an emergency in a moment. What anyone does in an emergency is determined by what he has done for a long time. This is why professional pilots are required to memorize each step on the emergency checklist.

The best time to know emergency procedures and the worst time to learn them is during an emergency.

Take the case of the Pan-Am pilot who discovered part of his wing burned off shortly after takeoff for SFO. He remained calm and methodical and landed the crippled 707 with nary a scratch on passengers or crew. The able Captain Kimes commented, "I'm very grateful for the forceful training that the Friendly Aviation Agency has required me to sustain and be subjected to—I don't think I ever appreciated that training before to the extent that I do now."

In accident investigation we usually find that everything the pilot did or failed to do led up to the accident. Had there been some planning, yes, even a bit of thinking, there would have been no accident.

Airplanes are becoming more stable, more dependable, and have better performance all the time. Don't let that lull you to sleep. We owe it to our passengers and family to know procedures to prevent emergencies. We also need to know how to handle the emergency if it does arise. We need recurrent training—**Every One Of Us**. A real emergency could occur on the next flight.

## CENTERLINE

By: Jim White, Chief

Air Transportation Bureau

### LINDBERGH COMMEMORATIVE TOUR

The Experiential Aircraft Association (EAA) and the EAA Museum Foundation jointly announced the details of its 1977 Lindbergh Commemorative Tour. The EAA Foundation said it plans a national tour of 102 cities in all 48 contiguous United States with its replica of the "Spirit of St. Louis." The airplane will be flown by several EAA members along the route and will cover over 22,000 air miles. The replica of the "Spirit of St. Louis" was built in the shops of the EAA Aviation Museum in Franklin, Wisconsin. Construction on the replica began on October 26, 1976, and the first flight of the aircraft took place on March 22, 1977.

The aircraft is scheduled to arrive in Missoula at Johnson Bell Field at 11:00 a.m. on August 26. This is the only city in Montana where the aircraft will stop for public display.

### GENERAL AVIATION REPORTS RECORD FIRST HALF

The General Aviation Manufacturers Association reports shipments and billings of new general aviation aircraft set an industry record in the first half of 1977. Shipments through June 30 totaled 8,637 units, up 6.5% from 8,108 units reported in the first six months of 1976, and factory net billings were \$729.2 million for an increase of 21.8% from \$598.9 million in the same period last year.

"The record half," said GAMA's president, Edward W. Stimpson, "indicates the continued strength of the general aviation market, and the acceptance of general aviation's role in our air transportation system."

June billings totalled \$123.3 million on shipments of 1,490 units, up 23.5% and 15% respectively from June, 1976 when \$99.8 million on shipments of 1,296 units were reported.

### EXPANSION OF UNICOM FREQUENCIES

The Federal Communications Commission plans an expansion and realignment of frequencies available for aeronautical advisory stations (unicoms) to relieve congestion on the frequency currently available. The action, prompted by a petition filed by the Aircraft Owners & Pilots Association was scheduled to become effective May 20, 1977. AOPA said more than

Continued on page 8



**TOWNSEND FLY-IN**





**SCHAFER MEADOWS FLY-IN**  
Work Session

(Continued from Page 5)

2,000 ground stations have been assigned to the 122.8 MHz frequency, and urged operators who want to use one of the new frequencies to apply for it now. Licenses issued before February 1, 1979 will be changed to the new frequency at the time of issue if an application is made and approved. Breakdown of the new frequency alignment follows:

- mHz
- 122.700—Aeronautical Advisory (AA)—uncontrolled fields
  - 122.725—AA—private airports not open to the public
  - 122.750—AA—private airports not open to the public and air-to-air communications (air-to-air usage is permitted only after January 1, 1978)
  - 122.775—Future AA or multicom use
  - 122.800—AA—uncontrolled airports
  - 122.825—Future AA or multicom use
  - 122.850—Multicom
  - 122.875—Future AA or multicom
  - 122.900—Multicom
  - 122.926—Multicom—natural resources
  - 122.950—AA—airports with control tower
  - 122.975—AA—high altitude
  - 123.000—AA—uncontrolled airports
  - 123.025—Future AA or multicom
  - 123.050—AA—heliports
  - 123.075—heliports

#### NEW CODING SYSTEM

For flight plans (both IFR and VFR) adopted by FAA July 1, essentially adds, changes codes to reflect altitude-encoding capability. Changes are in designation letters after slash mark:

- BE35/X no transponder
- /T 4096-code transponder, no altitude encoding capability
- /U 4096-code transponder, with altitude encoding capability
- /D DME, no transponder
- /B DME, 4096-code transponder with no altitude encoding
- /A DME, 4096-code transponder with altitude encoding capability
- /M TACAN only, no transponder
- /N TACAN only, 4096-code transponder with no altitude encoding
- /P TACAN only, 4096-code transponder with altitude

- encoding
- /C RNAV, 4096-code transponder, no altitude encoding
- /F RNAV, 4096-code transponder with altitude encoding
- /W RNAV and no transponder

New system already in use by ATC, applies to all plane types, civil and military.

## AIRCRAFT CRASH AND RESCUE SCHOOL

The Montana Air National Guard Fire Department and the Montana Fire Services Training School are again sponsoring the annual aircraft Crash and Rescue School to be held on the Great Falls International Airport, September 26 through the 30th, 1977.

The purpose of this school is to provide information and skills to fire service personnel for effective accomplishment of the various tasks involved in aircraft emergencies. It is further designed for all types of fire protection organizations and covers both conventional and specialized aircraft fire fighting apparatus.

Instructors will include Jens Bolstad, with the Montana Fire Services Training School; Darrell Thomas, Chief of the Montana Air National Guard Fire Department; and assisted by John Ball, Gordon Jolliffe and Billy Plunkett; Bill Raynes, Great Falls Police Department and Allen Butterworth, FAA Certification Specialist, Denver.

For additional information write Montana Fire Services Training School, 2100 16th Avenue South, Great Falls, MT 59405, or call (406) 761-7885. Registration fee is \$30.00.

## FUEL MIXTURE LEANING

By: Jack W. Van De Riet  
Accident Prevention Specialist  
RM-GADO-5

An aircraft engine reacts and performs to **density** altitude; i.e., a 3,500 foot indicated altitude field with an ambient temperature of 72°F would have a density altitude of 5,000 feet and the engine would lack power and probably run rough because of a rich mixture.

The normally aspirated direct drive engine generally requires the mixture leaned on the ground for efficient takeoff performance where airports are 5,000 feet (density altitude) or higher.

As altitude increases, the density of the air decreases. Therefore, it is necessary to properly lean the mixture in order to keep the correct fuel/air ratio. However, the operator must give careful attention to the operational limitations and requirements of the specific engine and airplane model, with the following recommendations:

1. The fixed pitch propeller—lean to maximum RPM at full throttle prior to takeoff where there is a density altitude of 5,000 feet or higher. Limit operation at full throttle on the ground to a minimum time.

2. Direct drive normally aspirated engine with a prop governor—set throttles at cruise power and lean mixture to maximum RPM and smooth operation of engine. If the power plant has a marked fuel flow gauge, set mixture in accordance with instructions on fuel flow gauge, set mixture in accordance with manufacturer's Pilot's Manual.

3. Pressure carburetor with Automatic Mixture Control (AMC)—no manual leaning without proper instrumentation.

4. Turbocharged and supercharged engines—all takeoffs at full rich mixture.

5. Read the Owner's Handbook.

## UNMARKED POTENTIAL HAZARDS

The Helena General Aviation District Office, FAA, has advised that recent analysis of aircraft accidents indicates a need for identification and cataloging of environmental hazards which could, and in some cases have, affected safety of flight in the Rocky Mountain Region.

Many of these hazards are located in remote areas and are not shown on appropriate aeronautical charts.

Environmental hazards such as mine cables in remote mountainous regions have been struck by helicopters because the pilot had no way of knowing of its location. Other hazards, such as wires, have been repeatedly hit by low flying aircraft because of a lack of publication regarding their presence. Several of the hazards known at this time were discovered only after a fatal aircraft accident.

If you know of any unmarked potential hazards, please advise the General Aviation District Office and the Montana Aeronautics Division.



**SCHAFFER MEADOWS FLY-IN**

## **WATCH THOSE ATC CLEARANCES OR INSTRUCTIONS**

The General Aviation District Office has advised that nonadherence to ATC clearance or instructions may have been a contributing factor to previous incidents or accidents. These incidents indicate that pilots should be more attentive to clearances or instructions issued by Air Traffic Controllers.

The importance of each pilot being absolutely certain that he thoroughly understands and complies with ATC clearances or instructions cannot be over emphasized. If there is the slightest doubt about any ATC clearance or instructions, the pilot is urged to seek clarification.

For further information and clarification, see pilot/controller roles and responsibilities, pages 1-76, AIM, Part I.

## **CONGRATULATIONS**



### **FAA CERTIFICATES ISSUED RECENTLY TO PILOTS**

#### **STUDENT**

Larry Eugene Pust, Billings  
John Collinge Thompson, Forsyth  
Debra D. Barrow, Billings

#### **PRIVATE**

LeRoy Manuel Leale, San Jose  
Larry Duane Miller, Ennis  
Susanne Lynn Whalen, Red Lodge  
Buford Nels Madsen, Billings  
Ronald Melvin Russell, Billings  
Ronald Dale Bradshaw, Billings  
James Lee Cleveland, Ballantine  
Joseph Fredrick Greenwood, Billings  
Fred DeWayne Wagoner, Miles City  
Carole Diann Ward, British Columbia  
John Lind Molliet, British Columbia  
Kerry Joy Molliet, British Columbia  
Laurence Joe Siroky, Helena  
Richard David Nicholson, Chinook  
Kearn Merle Risomon, Hogeland  
Dale Lee Miller, Bozeman  
Jonathan R. Potter, Bozeman  
Lawrence Eugene Bartel, Kalispell  
Diana Lynn Alme, Cut Bank  
Rex Emerson Lewis, Townsend  
Richard Kerry Holtzin, Wheatridge, CO  
Glenn P. Miniger, Helena

Mari Ann Jaraczski, Great Falls  
 Fred Franklin Schafer, Great Falls  
 Harold Dean Whitesitt, Stevensville  
 Thomas Russell Johnson, Cut Bank  
 Curtis Ross McIntyre, Whitefish  
 Ronald Dale Abraham, Kalispell  
 Bruce K. McFadgen, Stevensville  
 Charles Ray Briese, Helena  
 Lisa Marie Waite, Elliston  
 Joseph H. Walsh, Butte  
 James Wayne Sedivy, Hingham  
 Paul Daniel Miller, Great Falls  
 Wayne Thomas Shoop, Anaconda  
 Stephen James Carney, Scobey  
 David Dale Enebo, Glasgow  
 James Adolf Holte, Plentywood  
 Bruce Gordon Sanford, Froid  
 Michael David Martin, Glasgow  
 Wilbur David Unrau, Wolf Point  
 Lewis John Krutzfeldt, Powderville  
 Jerry Lee Weibert, Hardin  
 Victor P. Johnson, Billings  
 Dennis Rodney Masbrugh, Billings  
 Vernon Randle Marmon, Hysham  
 Oliver Marc Korshin, Billings  
 Harold Thomas Rhode, Billings  
 Eugene Paul Allard, Billings  
 Clinton, Doyle Shields, Whitefish  
 Harry Wesley Eass, Corvallis  
 Steven Luckey Rezin, Missoula  
 Ron Edward Winterrowd, Great Falls  
 Daniel Hilt, Barto, PA  
 Kevin Craven McCann, Wolf Point  
 Ruth Emily Smith, Rudyard  
 John Anthony Romito, Missoula  
 Robert Harold Stobart, Bozeman  
 Mark Alan Swank, Poplar  
 Gary Louis Ott, Columbia Falls  
 Laurie Anne Scott, Helena  
 Bettina Galer Anderson, Columbia, Ohio  
 Francis Robert Finnegan, Three Forks  
 Larry Morace Koon, Rexburg, Idaho (SES)  
 Jack Ronald Creveling, Cascade  
 William Charles James, Dillon  
 David Aaron Knadler, Kalispell  
 Ronald Edward Donnelly, Edmonton, Alberta, Can.  
 William Curtis Sutter, Havre  
 Thomas Edward Hoyer, Box Elder  
 Mike Scott Devoe, Polson  
 Kenneth P. Norgaard, Poplar  
 Gary Ray Urquart, Missoula  
 Tom Roland Philips, Missoula

Frank Lavern Hopple, Billings  
**COMMERCIAL**  
 Scott Charles Rae, Great Falls  
 Robert Lyle Groom, Libby  
 Emmanuel Nnamdi Agina, Ikeja Lagos, Nigeria  
 John Thmas Lesuer II, Great Falls  
 Roger K. Muchmore, Missoula  
 Mark Christopher Seery, Missoula  
 Ricky Lee Jansma, Billings  
 Mort Douglas Cox, Missoula  
 John Charles Maun, Missoula  
**MULTI ENGINE**  
 Jay Eugene Harvey, Roy  
 Michael Stephen Schultz, Altomote Springs, Florida  
 Richard LeRoy Johnson, Billings  
 Merrill Eugene Percy, Jr., Miles City  
 Larry Dwaine Blanton, Whitefish  
 Richard Lee Juntunen, Jefferson City  
 William Thomas Dawson, Kalispell  
 John Varrel Novak, Billings  
 Duane Douglas Sly, Cody, WY  
 John Francis Patten, Helena  
 Terry Francis Albertson, West Yellowstone  
 Jerry Lynn McLaughlin, Bozeman  
 Michael George Rafferty, Missoula  
 Martin Vincent Lau, Missoula  
 James Barnet Porter, Kalispell  
 Richard Lee Juntunen, Jefferson City  
 Marshal Jay Jones, Billings  
 Thomas Michael Monaghan, Miles City  
**INSTRUMENT**  
 Ricky Lee Jansma, Billings  
 Thomas Orval Markle, Glasgow  
 Kenneth Baxter Porter, Kalispell  
 Ben Frank Roy, Darby  
 Mark Christopher Seery, Missoula  
 Larry Dwaine Blanton, Whitefish  
 Roger Muchmore, Missoula  
 Michael Francis McKinley, Great Falls  
 Monte Massar, Jordan  
 Vincent James Frezzo, Missoula  
 William Powell Corbin, Miles City  
 Marshal Jay Jones, Billings  
 Verne Edward Wagenaar, Hardin  
 Nancy Elizabeth Jenkins, Buffalo, WY  
 Nolan G. Lacey, Cut Bank  
 James William Lowe, Billings  
 Merlin Bobby Norbury, Butte  
 David Bryan Rossetter, St. Charles, IL  
 Ralph Harold Aylstock, Helena  
 Robert George Justeson, Bozeman  
 Wayne Aaron Dykstra, Missoula

Richard Thomas Woodworth, Rodeo, NM  
 David F. Bruce, Bozeman  
 Richard L. Juntunen, Jefferson City  
 Wayne H. Baer, Ronan  
 Martin V. Lau, Missoula  
 John R. Lien, Great Falls  
 Robert D. McIver, Seattle, WA  
 Richard D. Hoffman, Bozeman  
 Fred J. Flanders, Helena  
 Jack Wayne Mathis, White Sulphur Springs  
 Darrell W. Benjamin, Fort Benton  
 LeRoy C. Taylor, Nevada, MO  
 Daniel J. Gebhardt, Hardin  
 Byron F. Wolenetz, Baker  
 Samuel E. Richardson, Fort Peck  
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 Mitchell Roy Jorgenson, Billings  
 Donald Michael Posivio, Billings  
 Gregory Dean Halvorson, Helena  
 Richard James Goodhart, Ranier, WA  
 Daniel Richard Morrison, Anaconda  
 Charles Wilson Geer, Bel Air, MD  
 Earl Leroy Norcutt, Jr., Havre (FII)  
 Daniel Kenneth White, Hamilton, (FII)  
 Richard Lee Podry, Great Falls (FIASE)  
 John Raymond Archibald, Whitefish (Reissue)  
 William Francis Abel, Helena  
 William Ervin Rahn, Livingston  
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**MECHANICS**  
 Gerald Michael Floyd, Power (AM & PM)  
 Steve Lloyd Sutton, Lewistown (AM)  
 Arnold Richard Houdek, Shelby (PM)  
 Kent William Potter, Kalispell (AM & PM)

## H MARKERS

By: Jerry Burrows  
Aviation Representative

**CHOTEAU**—Work is progressing on the Choteau NDB with "turn-on" expected later this summer.

Comments are presently being received by the FAA in Denver until July 1 concerning the Choteau installation. Please contact us for address, etc., if you wish to comment. The FCC radio station license for the Choteau installation should be received shortly after that.

The pilots in the Choteau area have banded together to provide the community's share of the state contract for the installation of the H Marker, including 65 ft. antenna poles and related hardware, trenching, power hookup, and labor that is normally supplied or paid for by the airport board. The board has, however, agreed to pay the monthly power and service technician costs.

Harold Bouma and John Brandvold, Choteau, along with Frank Fleisner and myself, surveyed and installed the counter-poise or underground wire system June 1 and 2. It certainly makes the installation a lot easier when we have this type of cooperation with the local pilots.

The two antenna poles are painted and at the site. The transmitter building has been shipped and as soon as this and the poles have been erected we can complete wiring the antenna. We hope by that time the FCC license and the new 50 watt solid-state transmitter will be available and we can get the Choteau H Marker "turned-on."

**SCOBEY**—A site investigation was held on June 6 with Wally Edland, chairman, Daniels County Airport Commission, and board member Jerry Fjeld and myself for installation of an NDB to serve the Scobey area. A location on the northeast corner of the airport property was selected.

The preliminary application with the FAA has been made with the actual development of the site not to begin until this fall or until the crops on the land have been harvested.

**HAVRE**—The Leeds NDB (LDS) used as a step down fix for the Havre Airport is to be relocated from the top of a downtown building to a site closer to the airport. The eventual demolition of the building is the main reason for its transfer. You will probably not even notice this change and there will not be much of a change in the minimums.

Neal Brenna, Chairman, Havre City



Electrician Jim Smith operating a trencher for the Choteau H Marker.



Choteau pilots Harold Bouma and John Brandvold at the Choteau airport.



A pile of twisted metal is all that remains standing of a hangar after strong winds swept over the Choteau Airport June 1.

County Airport Board, furnished transportation, assisted with the site investigation and provided coordination with the parties involved when I visited Havre June 14. Thanks.

The state will assume ownership of this facility, presently owned by KOJM, Havre, and responsibility in operating this station. The Havre Airport Board will provide the site, maintenance and utilities for this station.

**CIRCLE**—The transmitter has been undergoing extensive testing in order to determine why it keeps shutting down. Mike Sokoloski, our technician in Circle, and Jerry Howard, with the state Communications Division, Glendive, and myself worked on the station June 7, in our investigative efforts. We hope to have this finalized in the very near future.

**GENERAL**—Heat has been a

problem at other locations although not to the same degree as Circle. We are going to modify at least 8 of our locations this summer to provide some type of ventilation systems for the transmitters, such as turbine ventilators or thermostatically controlled fans.

We know that our transmitters go down from time to time, usually for maintenance work. Please give us a call if you know of any station that has been down for over a day or if the usable range has decreased over a period of time. The transmitter may appear to be operating satisfactorily to the technician but outside influences, such as antenna resistance, ground conditions, and so forth, may actually decrease the output. Please call collect 449-2506 if you are aware of any problems with any of our H Markers. Thank you.

## CALENDAR

**August 24-27**—International Northwest Aviation Council, Great Falls.

**August 26**—"Spirit of St. Louis"—Johnson-Bell Field, Missoula.

**August 28-Sept. 1**—National Association of State Aviation Officials, Seattle.

**September 15-16**—Montana Aeronautics Board Meeting, Helena.

**September 30-Oct. 1**—Montana Flying Farmer Convention, Billings—Holiday Inn West.

**October 29**—1st Annual VFR "Halloween" Handicap Air Race, Great Falls to Jackpot, Nevada.

**October 31**—Deadline for applications for Whirly Girls Scholarship.

### MEMBER

#### NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

**PURPOSE**—"To foster aviation, as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in **research, development, and advancement of aviation**; to develop uniform laws and regulations; and to otherwise encourage co-operation and mutual aid among the several states."



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